

Belle Isle, Florida

Impact Fee Study



**for Transportation, Parks,
and General Government Facilities**

prepared by

duncan | associates

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Staff Review Draft

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Duncan Associates

Clancy Mullen, Principal/Project Manager
17409 Rush Pea Circle, Austin, Texas 78738
(512) 423-0480, clancy@duncanassociates.com

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EXECUTIVE SUMMARY

The purpose of this study is to update the City's transportation impact fees and calculate potential additional impact fees for parks and general government facilities. The City adopted traffic impact fees in 2005. Ordinance 05-06 assesses a fee of \$1,431 per dwelling unit on new residential development. While the City does not have a formal study, Exhibit A of the ordinance describes how the fee was derived: \$3.72 million in planned transportation improvements over 20 years was divided by 2,600 new homes. Traffic impact fees are not assessed on new nonresidential development.

Study Approach

Legal Framework. The recent amendments to the impact fee act by the Florida legislature restrict how impact fees can be increased. Any impact fee increase of less than 25% must be phased in over two years, and any increase between 25-50% over four years. No fee can go up more than 50% over four years. Aside from annual phasing of increases, fees can only be increased once every four years (this provision would appear to rule out annual increases to account for cost inflation).

While these provisions seem pretty straight-forward, it gets more complicated because there is generally not a single impact fee. When fees are updated, the fees for individual land uses for each type of fee tend to change at different rates. In addition, each fee needs to be proportional to the impact of the development, meaning all land uses should be assessed at the same percentage of the maximum calculated fee, whether that is 100% or a lower percentage. If one category increases by a significantly higher percentage than the others, it will impose a significant limit on how much fees for other categories can be increased or assessed.

With respect to this study, the new restrictions will affect how much the transportation impact fees may be increased, but are not applicable to the potential new impact fees for parks and general government facilities. However, these restrictions could be a major factor in implementing a future study update for those fees. There is also the option to exceed the maximum increases by claiming extraordinary circumstances require it, such as the fact that the fees have not been updated in over 15 years. Additional discussion of this option can be found in the Legal Framework and Transportation chapters.

Transportation Fees. Belle Isle is relatively unique in assessing transportation impact fees only on new residential dwelling units. It would be difficult to support the assumption implicit in the current fees that only new residential development creates the need for transportation improvements. Every trip has a destination, and most trips generated by residences are bound for a nonresidential use. Standard practice in impact fee analysis is to divide responsibility for a trip between the origin and the destination. Based on current land uses in the city, about a quarter of existing traffic on City streets is attributable to nonresidential development. The approach taken in this study is to be consistent with standard practice and calculate transportation impact fees for nonresidential uses as well.

Land Use Categories. This study proposes the following land use categories for all the fee types (with the exception of no nonresidential fees for parks): single-family detached (including manufactured homes), multi-family (including apartments, townhomes, condominiums, and time-shares), retail/commercial, office (including medical office), industrial/warehouse, and public/institutional. For more discussion on this topic, see the Land Use Categories chapter.

Methodology. The City’s current traffic impact fee appears to have been calculated using what is called a “plan-based” methodology, in which planned costs needed to accommodate anticipated development over a period of time is divided by the anticipated development. This methodology requires a long-range master plan that clearly establishes the nexus between the amount of growth and the planned improvements. This study uses the alternative “consumption-based” methodology, which is used for most transportation impact fee studies in Florida. For more discussion on this topic, see the Methodology chapter.

Maximum Fees

This impact fee study calculates fees that charge the proportionate fair share of the cost to accommodate new development at the existing level of service for various land use types. In that sense, the fees summarized in Table 1 below are maximum fees. The City can adopt them at some percentage less than 100%, but the implementation percentage should be the same for all land use categories for each fee type to preserve the proportionality of the fees to the impact of development.

Table 1. Maximum Impact Fees

Land Use Type	Unit	Transp.	Parks	General	Total
				Gov’t	
Single-Family Detached	Dwelling	\$3,277	\$781	\$1,025	\$5,083
Multi-Family	Dwelling	\$2,541	\$687	\$902	\$4,130
Retail/Commercial	1,000 sq. ft.	\$4,535	n/a	\$957	\$5,492
Office	1,000 sq. ft.	\$3,771	n/a	\$455	\$4,226
Industrial/Warehouse	1,000 sq. ft.	\$779	n/a	\$91	\$870
Public/Institutional	1,000 sq. ft.	\$1,708	n/a	\$223	\$1,931

Source: Maximum fees from Table 12 (transportation), Table 19 (parks), and Table 26 (general government).

Fee Comparisons

Communities in the process of updating impact fees are naturally interested in knowing what nearby or comparable jurisdictions are charging. However, often-expressed concerns about the need to be “competitive” with other jurisdictions are not necessarily well-founded. Some studies have found that differences in impact fees between cities or counties in a state or region had no measurable effect on the rates of development. This is not surprising, given the

myriad of other market and regulatory factors that differ between jurisdictions besides impact fees. A reasonable comparison would be with non-utility fees charged in the unincorporated county and other cities in Orange County. All cities in the county also collect the County’s school impact fees. The proposed transportation impact fees are maximum fees, and assume the City opts to claim

extraordinary circumstances that allow it to exceed the HB 337 phasing requirements. The fees would be significantly lower if they need to comply with the phasing requirements (see Table 14 in the Transportation chapter). The fee comparisons are provided in Table 2. Note that even if the City's fees are adopted without a phase-in, they would still be lower than the average of these comparable jurisdictions.

Table 2. Impact Fee Comparisons

Jurisdiction	Roads	Parks	Fire	Police	GenGovt	Total
Single-Family (per unit)						
Apopka	\$3,101	\$1,060	\$708	\$747	n/a	\$5,616
Maitland	\$1,784	\$2,151	\$390	n/a	n/a	\$4,325
Orange County	\$3,898	\$1,721	\$339	\$502	n/a	\$6,460
Orlando	\$4,123	\$966	n/a	n/a	n/a	\$5,089
Winter Garden	\$3,517	\$1,300	\$491	\$339	n/a	\$5,647
Average*	\$3,285	\$1,440	\$482	\$529	n/a	\$5,427
Belle Isle (proposed)	\$3,277	\$781	n/a	n/a	\$1,025	\$5,083
Multi-Family (per unit)						
Apopka	\$2,178	\$1,060	\$708	\$747	n/a	\$4,693
Maitland	\$1,246	\$2,151	\$498	n/a	n/a	\$3,895
Orange County	\$2,524	\$1,165	\$232	\$194	n/a	\$4,115
Orlando	\$2,729	\$825	n/a	n/a	n/a	\$3,554
Winter Garden	\$2,470	\$1,159	\$491	\$339	n/a	\$4,459
Average*	\$2,229	\$1,272	\$482	\$427	n/a	\$4,143
Belle Isle (proposed)	\$2,541	\$687	n/a	n/a	\$902	\$4,130
Retail (per 1,000 sq. ft.)						
Apopka	\$10,686	n/a	\$640	\$1,000	n/a	\$12,326
Maitland	\$3,831	n/a	\$670	n/a	n/a	\$4,501
Orange County	\$6,135	n/a	\$307	\$786	n/a	\$7,228
Orlando	\$6,766	n/a	n/a	n/a	n/a	\$6,766
Winter Garden	\$8,479	n/a	\$850	\$650	n/a	\$9,979
Average*	\$7,179	n/a	\$617	\$812	n/a	\$8,160
Belle Isle (proposed)	\$4,535	n/a	n/a	n/a	\$957	\$5,492
Office (per 1,000 sq. ft.)						
Apopka	\$3,090	n/a	\$490	\$290	n/a	\$3,870
Maitland	\$2,036	n/a	\$210	n/a	n/a	\$2,246
Orange County	\$4,748	n/a	\$269	\$265	n/a	\$5,282
Orlando	\$4,576	n/a	n/a	n/a	n/a	\$4,576
Winter Garden	\$5,748	n/a	\$850	\$650	n/a	\$7,248
Average*	\$4,040	n/a	\$455	\$402	n/a	\$4,644
Belle Isle (proposed)	\$3,771	n/a	n/a	n/a	\$455	\$4,226
Industrial (per 1,000 sq. ft.)						
Apopka	\$1,445	n/a	\$70	\$70	n/a	\$1,585
Maitland	\$795	n/a	\$160	n/a	n/a	\$955
Orange County	\$1,185	n/a	\$84	\$146	n/a	\$1,415
Orlando	\$1,220	n/a	n/a	n/a	n/a	\$1,220
Winter Garden	\$4,690	n/a	\$850	\$650	n/a	\$6,190
Average*	\$1,867	n/a	\$291	\$289	n/a	\$2,273
Belle Isle (proposed)	\$779	n/a	n/a	n/a	\$91	\$870

* average fees by fee type exclude jurisdictions that do not charge that fee

Source: Belle Isle's proposed maximum fees from Table 1; other jurisdiction's fees from Duncan Associates survey, July 20, 2021.

LEGAL FRAMEWORK

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to traditional “negotiated” developer exactions, impact fees are charges that are assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are one-time, up-front charges, with the payment usually made at the time of building permit issuance. Essentially, impact fees require that each new development project pay its pro-rata share of the cost of new capital facilities required to serve that development.

Case Law

Because impact fees were pioneered in states like Florida that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government’s broad “police power” to regulate land development in order to protect the health, safety and welfare of the community. The courts have developed guidelines for constitutionally-valid impact fees, based on “rational nexus” standards. The standards essentially require that the fees must be proportional to the need for additional infrastructure created by the new development and must be spent in such a way as to provide that same type of infrastructure to benefit new development. A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was quoted and followed by the Florida Supreme Court in its 1991 St. Johns County decision:

In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.¹

One of the most fundamental principles of impact fees, rooted in case law, is that impact fees should not charge new development for a higher level of service than is provided to existing development. While impact fees can be based on a higher level of service than the one existing at the time of the adoption or update of the fees, two things are required if this is done. First, another source of funding other than impact fees must be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development. In order to avoid these complications, the general practice is to base impact fees on the existing level of service.

¹ *Hollywood, Inc. v. Broward County*, 431 So. 2d 606, 611-612 (Fla. 4th DCA), review denied, 440 So. 2d 352 (Fla. 1983), quoted and followed in *St. Johns County v. Northeast Florida Builders Ass’n*, 583 So. 2d 635, 637 (Fla. 1991).

A corollary principle is that new development should not have to pay more than its proportionate share when multiple sources of payment are considered. As noted above, if impact fees are based on a higher-than-existing level of service, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development. Given that new development will pay impact fees to provide the existing level of service for itself, the fact that new development may also be paying for the facilities that provide that level of service for existing development could amount to paying for more than its proportionate share. Consequently, impact fees should be reduced to account for future payments that will retire outstanding debt on existing facilities.

The issue is less clear-cut when it comes to other types of revenue that may be used to make capacity-expanding capital improvements of the same type being funded by impact fees. No credit is warranted in most cases because while new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible. The City does not earmark its tax funds for specific types of capital improvements, but programs such funds for growth-related improvements when impact fee funds are insufficient. No revenue credit is warranted for such discretionary use of general fund revenues.

Credit has also sometimes been provided for outside grants for capacity improvements that can reasonably be anticipated in the future. In addition to the argument presented above (i.e., grants raise the level of service and benefit new development as well as existing development), two additional arguments can be made against applying credit for grants. First, new development in a community does not directly pay for State and Federal grants in the same way they pay local gasoline and property taxes. Second, future grant funding is far more uncertain than dedicated revenue streams. An exception is State/Federal funding for transportation improvements. On the other hand, local governments have less discretion about whether to spend grant funding on capacity-expanding capital improvements.

There are specific circumstances where a stronger case can be made that a credit should be provided. An example is state/federal transportation funding. Of all the types of impact fee facilities, transportation systems tend to be highly integrated between jurisdictions, particularly in the form of the state and federal highway system. Neither the federal government nor any state government assesses a transportation impact fee (although Louisiana considered the idea), and local governments often contribute to the cost to improve such roads, because matching local funding will make the improvement more attractive to the state transportation department. Many communities include state and federal highways in their transportation impact fee studies because they form an integral part of the local transportation system. However, the local government is not responsible for these roads, which are primarily funded from federal and state revenues. In this instance, a credit would seem to be warranted.

Florida Statute

The 2006 Florida Legislature passed Senate Bill 1194, which established certain requirements for impact fees in Florida. It was most recently amended by House Bill 337, which was signed by the governor and became effective on June 4, 2021. The current Florida Impact Fee Act reads as follows (major changes made by HB 337 are indicated by underline/strike-out):

163.31801 Impact fees; short title; intent; minimum requirements, audits; challenges.--

(1) This section may be cited as the "Florida Impact Fee Act."

(2) The Legislature finds that impact fees are an important source of revenue for a local government to use in funding the infrastructure necessitated by new growth. The Legislature further finds that impact fees are an outgrowth of the home rule power of a local government to provide certain services within its jurisdiction. Due to the growth of impact fee collections and local governments' reliance on impact fees, it is the intent of the Legislature to ensure that, when a county or municipality adopts an impact fee by ordinance or a special district adopts an impact fee by resolution, the governing authority complies with this section.

(3) For purposes of this section, the term:

(a) "Infrastructure" means a fixed capital expenditure or fixed capital outlay, excluding the cost of repairs or maintenance, associated with the construction, reconstruction, or improvement of public facilities that have a life expectancy of at least 5 years; related land acquisition, land improvement, design, engineering, and permitting costs; and other related construction costs required to bring the public facility into service. The term also includes a fire department vehicle, an emergency medical service vehicle, a sheriff's office vehicle, a police department vehicle, a school bus as defined in s. 1006.25, and the equipment necessary to outfit the vehicle or bus for its official use. For independent special fire control districts, the term includes new facilities as defined in s. 191.009(4).²

(b) "Public facilities" has the same meaning as in s. 163.3164 and includes emergency medical, fire, and law enforcement facilities.³

(4) At a minimum, each local government that adopts and collects an impact fee by ordinance and each special district that adopts, collects, and administers an impact fee by resolution must:

(a) Ensure that the calculation of the impact fee is based on the most recent and localized data.

(b) Provide for accounting and reporting of impact fee collections and expenditures and account for the revenues and expenditures of such impact fee in a separate accounting fund.

(c) Limit administrative charges for the collection of impact fees to actual costs.

(d) Provide notice at least 90 days before the effective date of an ordinance or resolution imposing a new or increased impact fee. A local government is not required to wait 90 days to decrease, suspend, or eliminate an impact fee. Unless the result is to reduce the total mitigation costs or impact fees imposed on an applicant, new or increased impact fees may not apply to current or pending permit applications submitted before the effective date of a new or increased impact fee.

² 191.009(4) ... As used in this subsection, "new facilities" means land, buildings, and capital equipment, including, but not limited to, fire and emergency vehicles, radiotelemetry equipment, and other firefighting or rescue equipment. ...

³ 163.3164(39) "Public facilities" means major capital improvements, including transportation, sanitary sewer, solid waste, drainage, potable water, educational, parks and recreational facilities.

- (e) Ensure that collection of the impact fee may not be required to occur earlier than the date of issuance of the building permit for the property that is subject to the fee.
 - (f) Ensure that the impact fee is proportional and reasonably connected to, or has a rational nexus with, the need for additional capital facilities and the increased impact generated by the new residential or commercial construction.
 - (g) Ensure that the impact fee is proportional and reasonably connected to, or has a rational nexus with, the expenditures of the funds collected and the benefits accruing to the new residential or nonresidential construction.
 - (h) Specifically earmark funds collected under the impact fee for use in acquiring, constructing, or improving capital facilities to benefit new users.
 - (i) Ensure that revenues generated by the impact fee are not used, in whole or in part, to pay existing debt or for previously approved projects unless the expenditure is reasonably connected to, or has a rational nexus with, the increased impact generated by the new residential or commercial construction.
- (5) (a) Notwithstanding any charter provision, comprehensive plan policy, ordinance, development order, development permit, or resolution, the local government or special district must credit against the collection of the impact fee any contribution, whether identified in a proportionate share agreement or other form of exaction, related to public ~~education~~ facilities, including land dedication, site planning and design, or construction. Any contribution must be applied on a dollar-for-dollar basis at fair market value to reduce any ~~education-based~~ impact fee collected for the general category or class of public facilities or infrastructure for which the contribution was made.
- (b) If a local government or special district does not charge and collect an impact fee for the general category or class of public facilities or infrastructure contributed, a credit may not be applied under paragraph (a).
- (6) A local government, school district, or special district may increase an impact fee only as provided in this subsection.
- (a) An impact fee may be increased only pursuant to a plan for the imposition, collection, and use of the increased impact fees which complies with this section.
 - (b) An increase to a current impact fee rate of not more than 25 percent of the current rate must be implemented in two equal annual increments beginning with the date on which the increased fee is adopted.
 - (c) An increase to a current impact fee rate which exceeds 25 percent but is not more than 50 percent of the current rate must be implemented in four equal installments beginning with the date the increased fee is adopted.
 - (d) An impact fee increase may not exceed 50 percent of the current impact fee rate.
 - (e) An impact fee may not be increased more than once every 4 years.
 - (f) An impact fee may not be increased retroactively for a previous or current fiscal or calendar year.
 - (g) A local government, school district, or special district may increase an impact fee rate beyond the phase-in limitations established under paragraph (b), paragraph (c), paragraph (d),

or paragraph (e) by establishing the need for such increase in full compliance with the requirements of subsection (4), provided the following criteria are met:

1. A demonstrated need study justifying any increase in excess of those authorized in paragraph (b), paragraph (c), paragraph (d), or paragraph (e) has been completed within the 12 months before the adoption of the impact fee increase and expressly demonstrates the extraordinary circumstances necessitating the need to exceed the phase-in limitations.

2. The local government jurisdiction has held not less than two publicly noticed workshops dedicated to the extraordinary circumstances necessitating the need to exceed the phase-in limitations set forth in paragraph (b), paragraph (c), paragraph (d), or paragraph (e).

3. The impact fee increase ordinance is approved by at least a two-thirds vote of the governing body.

(h) This subsection operates retroactively to January 1, 2021.

(7) If an impact fee is increased, the holder of any impact fee credits, whether such credits are granted under s. 163.3180, s. 380.06, or otherwise, which were in existence before the increase, is entitled to the full benefit of the intensity or density prepaid by the credit balance as of the date it was first established. ~~This subsection shall operate prospectively and not retrospectively.~~

(8) A local government, school district, or special district must submit with its annual financial report required under s. 218.32 or its financial audit report required under s. 218.39 a separate affidavit signed by its chief financial officer or, if there is no chief financial officer, its executive officer attesting, to the best of his or her knowledge, that all impact fees were collected and expended by the local government, school district, or special district, or were collected and expended on its behalf, in full compliance with the spending period provision in the local ordinance or resolution, and that funds expended from each impact fee account were used only to acquire, construct, or improve specific infrastructure needs.

(9) In any action challenging an impact fee or the government's failure to provide required dollar-for-dollar credits for the payment of impact fees as provided in s. 163.3180(6)(h)2.b., the government has the burden of proving by a preponderance of the evidence that the imposition or amount of the fee or credit meets the requirements of state legal precedent and this section. The court may not use a deferential standard for the benefit of the government.

(10) Impact fee credits are assignable and transferable at any time after establishment from one development or parcel to any other that is within the same impact fee zone or impact fee district or that is within an adjoining impact fee zone or impact fee district within the same local government jurisdiction and which receives benefits from the improvement or contribution that generated the credits. This subsection applies to all impact fee credits regardless of whether the credits were established before or after the effective date of this act.

(11) A county, municipality, or special district may provide an exception or waiver for an impact fee for the development or construction of housing that is affordable, as defined in s. 420.9071. If a county, municipality, or special district provides such an exception or waiver, it is not required to use any revenues to offset the impact.

(12) This section does not apply to water and sewer connection fees.

(13) In addition to the items that must be reported in the annual financial reports under s. 218.32, a local government, school district, or special district must report all of the following information on all impact fees charged:

- (a) The specific purpose of the impact fee, including the specific infrastructure needs to be met, including, but not limited to, transportation, parks, water, sewer, and schools.
- (b) The impact fee schedule policy describing the method of calculating impact fees, such as flat fees, tiered scales based on number of bedrooms, or tiered scales based on square footage.
- (c) The amount assessed for each purpose and for each type of dwelling.
- (d) The total amount of impact fees charged by type of dwelling.
- (e) Each exception and waiver provided for construction or development of housing that is affordable.

Key provisions of the Florida Impact Fee Act in effect prior to the 2021 amendments include the requirements that: (1) impact fees are calculated based on the most current and localized data, (2) administrative charges do not exceed actual costs, (3) 90 days' notice is provided before a new or increased impact fee goes into effect, (4) financial audits include certification of compliance with the Act, (5) the burden of proof in any impact fee litigation is on the local government, (6) fees cannot be collected prior to the date of issuance of a building permit, (7) developer contributions must be credited at full market value, (8) the value of developer credits must be increased by the same percentage when the applicable type of impact fees for which the credit was given is increased, and (9) waivers of impact fees for affordable housing projects, as defined in Sec. 420.9071, do not have to be offset with other government revenues. Other provisions relating to impact fees are scattered about in the Florida Statutes. For example, the boards of independent special fire control districts are authorized to establish fire impact fees in Section 191.009(4). Public schools are exempted from the payment of impact fees in Section 1013.371(1)(a). Mobility fees must comply with the Florida Impact Fee Act, per Sec. 163.3180(5)(i)

The major change in the 2021 amendments relates to restrictions on how much impact fees may be increased, and that is addressed in depth below. Another change is to require that eligible capital facilities have a minimum life expectancy of five years (although public safety vehicles appear not to be subject to this restriction). HB 377 also references a definition of public facilities in 163.3164(39) – “major capital improvements, including transportation, sanitary sewer, solid waste, drainage, potable water, educational, parks and recreational facilities” – and adds “emergency medical, fire, and law enforcement facilities.” This list leaves out support facilities that many jurisdictions charge for under the rubric of “general government” or “public building” fees, as well as rarer types of fees such as those for hurricane mitigation. Because the referenced definition does not expressly limit facilities to those listed, it does not appear to ban impact fees from covering non-listed facilities.

Restrictions on Fee Increases

As noted above, the most significant changes made in 2021 are new restrictions on impact fee increases. Any impact fee increase of no more than 25% must be phased in over two years, and any increase between 25-50% over four years. No fee can go up more than 50% over four years. Aside from annual phasing of increases, fees can only be increased once every four years (this provision

would appear to rule out annual increases to account for cost inflation). These requirements raise a number of questions, as discussed below.

(1) What is “an impact fee rate”? The Florida impact fee statute now says you can only increase “an impact fee rate” in compliance with the new phase-in requirements. One interpretation is that this refers to any impact fee rate by facility type for any land use. Another is that the restrictions only apply to the total impact fee for a given land use, and not to each individual impact fee rate. The biggest phasing challenge is the disparity between the percentage increases (or decreases) between different land uses, as the discussion in (3) below emphasizes. Using the total fees by land use could reduce the range of disparity.

(2) What is the current impact fee rate? A percentage increase requires knowing the current impact fee rate. How do you determine the current rate if the study update consolidates existing land uses into a broader category? An example would be a new retail/commercial category that includes dozens of existing specialized uses. Would one need to use the existing fee that was the lowest as the base existing rate for the entire category, even if that use is very rarely built today (e.g., an old-fashioned furniture store as opposed to a new big-box home furnishing superstore)? The other interpretation is that if a current rate cannot be readily determined, the updated fee for the new category can be adopted without any phase-in (subject to proportionality considerations in (3) below). An extreme example of not being able to identify the existing rate is when the assessment basis is changed, such as from per gas pump for a service station or per student for a school to fees per 1,000 sq. feet – determining the existing fee rate under such circumstances would be virtually impossible.

(3) How must phasing be consistent with proportionality? A strict application of the proportionality principle would seem to require that the updated fee for all land uses would have to be phased-in at the same percentage of the updated fees for all land use categories each year. The land use category with the biggest increase would set the percentage of the updated fee that all land uses would be assessed. Suppose a road impact fee update resulted in a 1% decrease for walk-in bank, a 50% increase for shopping center, a 100% increase for single-family, and a 400% increase for self-service car wash. In the first year, all the fees would need to be assessed at 22% of the updated fee, based on the percentage for the self-service car wash. In that first year, the self-service car wash fee would increase 12.5% (as allowed under HB 337), while the single-family fee would go down 53%, the shopping center fee would go down 65%, and the walk-in bank fee would go down 78%. The self-service car wash fee would not reach 100% of the updated amount for 16 years. This example may be a little on the extreme side, but it is not atypical, especially when the fee schedule includes a long list of nonresidential categories.

Broader nonresidential categories could make the fees easier to update. If the road schedule in the example was drastically simplified, with a single broad retail/commercial category, all the land uses would be at 59% of the maximum fees after four years. Another approach would be to take existing categories experiencing extreme increases out of the fee schedule, such as by merging them into a similar category.

It might be reasonable to temporarily suspend the proportionality requirement during the phase-in period. The idea is to limit revenue loss during the phase-in. Fees that are going down would go to the updated maximum amount immediately, rather than be reduced even more before moving up gradually to the updated amount. Categories that are going up no more than 25% would be increased over two years, etc. However, it would be hard to argue that getting all categories to parity 16 years later could be called temporary – the fees would be updated before then, the cycle would restart, and the various fee categories would never be based on the same percentage of the latest fair-share fees. But a four-year phase-in that got all the categories to parity, with at least a full year of proportionality before the fees are updated, would seem to be defensible.

(4) What are “extraordinary circumstances”? The bill allows the phase-in limitations to be exceeded, based on an analysis that “expressly demonstrates the extraordinary circumstances” that require exceeding them. The difficulty is deciphering what “extraordinary circumstances” means. There will likely be litigation over whatever rationale is used, and this might be necessary to clarify what kinds of circumstances qualify as “extraordinary.” In addition to a description of the extraordinary circumstances, two public hearings would need to be held on the issue within twelve months prior to ordinance adoption, and adoption would require a two-thirds majority of the governing body.

If the City decides not to pursue the extraordinary circumstances option, the recommended phasing approach is to allow the fees for the different land use categories to temporarily depart from strict proportionality during the phasing period, while ensuring that all categories are assessed at the same percentage of the updated fees during the fourth year.

LAND USE CATEGORIES

Transportation impact fees are generally what drives jurisdictions to include a large number of detailed use categories, and this is because published national trip generation data have long been available for hundreds of use categories. However, the fact that trip generation rates are available for so many land uses does not mean all of those uses must be included in the fee schedule. An alternative approach is to simplify the fee schedule by eliminating many of the uses and replacing them with a fewer number of broader, more generalized use categories. Having learned that attempts to enumerate every possible land use in the fee schedule is both unnecessary and overly complicated, many communities are now moving in this direction.

Rationale for Broad Categories

The fact that it may be possible to calculate impact fees for many specific land use types does not mean that all these categories need to be included in the fee schedule. As a general rule, the more specialized the category, the less robust the data about it. All the current uses have some trip generation data available, but for some the data are limited to only a few studies that were done years ago, and reliable data on trip length and percent new trips is even scarcer.

The fundamental policy choice related to the choice between general versus specific categories is whether fees should be assessed on new development based on the impact of the general long-term use of the development, or on the impacts of the specific initial occupant of the development. For example, much of the retail/commercial space being built can accommodate a wide range of uses, and may cycle among them during the development's useful life. As a reflection of the longer term impact, the general retail/commercial rate is the most appropriate for these types of developments.

The main argument for assessing fees based on the initial use is that the immediate impacts can be measured more precisely, and if the development changes to a more intensive use in the future, an additional fee can be assessed that charges for the increased impact. Given data constraints for many specialized uses, the accuracy even for the immediate impacts may not be as great as might be imagined. Change-of-use fees are paid by a prospective buyer or tenant, and can be a disincentive to the reuse of vacant retail/commercial buildings. There is also the equity issue that refunds are not provided if the use changes to something less intensive.

Most commercial uses occur within shopping centers, and trip generation rates for shopping centers assume a mix of uses. The *Trip Generation Manual* produced by the Institute of Transportation Engineers (ITE) notes that some of the shopping centers in its surveys include “non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities.” It also notes that some of the centers surveyed include outparcels, which often contain service stations, drive-in banks and fast-food restaurants. The proposed approach is to utilize the shopping center rate for all retail/commercial uses. Fees for the other nonresidential categories would be based on the lowest component rate.

Recommended Land Uses

Definitions for the six proposed land use categories are provided below. These definitions are intended to assist City staff in classifying proposed developments and assessing appropriate impact fees. If these definitions are adopted by ordinance or resolution, they should be accompanied by a disclaimer that they only apply to interpretation of the impact fee schedules.

Single-Family Detached means a building containing only one dwelling unit, including a mobile home not located in a mobile home park.

Multi-Family means a building containing two or more dwelling units. It includes duplexes, apartments, residential condominiums, townhouses, and timeshares.

Retail/Commercial means an integrated group of commercial establishments planned, developed, owned or managed as a unit, or a free-standing retail or commercial use. A retail or commercial use shall mean the use of a building or structure primarily for the sale to the public of nonprofessional services, or goods or foods that have not been made, assembled or otherwise changed in ways generally associated with manufacturing or basic food processing in the same building or structure. This category includes all uses located in shopping centers and includes but is not limited to the following types of free-standing uses:

Amusement park	Laundromat
Auto parts store	Laundry or dry cleaning
Auto wrecking yard	Lawn and garden supply store
Automobile repair	Massage establishment
Bank	Music store
Bar and cocktail lounge	Newsstand
Camera shop	Nightclub
Car wash	Racetrack
Convenience store	Recreation facility, commercial
Department store	Rental establishment
Florist shop	Repair shop, including auto repair
Food store	School, commercial
Grocery	Specialty retail shop
Hardware store	Supermarket
Health or fitness club	Theater, indoor (including movie theater)
Hobby, toy and game shop	Used merchandise store
Hotel or motel	Variety store
Junkyard	Vehicle and equipment dealer

Office means a building exclusively containing establishments providing executive, management, administrative, financial, or non-medical professional services, and which may include ancillary services for office workers, such as a restaurant, coffee shop, newspaper or candy stand, or childcare facilities. It may be the upper floors of a multi-story office building with ground floor retail/commercial uses. Typical uses include real estate, insurance, property management, investment, employment, travel, advertising, secretarial, data processing, telephone answering, telephone marketing, music, radio and television recording and broadcasting studios; professional or consulting services in the fields of law, architecture, design, engineering, accounting and similar professions; consulting services; and business offices of private companies, utility companies, trade associations, unions and nonprofit organizations. This category does not include an administrative office that is ancillary to the principal use on the site.

Industrial/Warehouse means an establishment primarily engaged in the fabrication, assembly, or processing of goods; the display, storage, and sale of goods to other firms for resale; and/or activities involving significant movement and storage of products or equipment.. Typical uses include manufacturing plants, industrial parks, research and development laboratories, welding shops, wholesale bakeries, dry cleaning plants, bottling works, wholesale distributors, storage warehouses, trucking terminals, moving and storage firms, recycling facilities, trucking and shipping operations, and major mail processing centers.

Public/Institutional means a governmental, quasi-public or institutional use, or a non-profit recreational use, not located in a shopping center or separately listed in the impact fee schedule. Typical uses include churches, day care centers, elementary and secondary schools, higher education facilities, hospitals, nursing homes, city halls, courthouses, fire stations, post offices, jails, parks, libraries, museums, military bases, airports, bus stations, and fraternal lodges.

METHODOLOGY

This chapter provides a brief overview of impact fee methodology. Key components of an impact fee methodology include the following:

- the set of facilities for which the impact fees are charged,
- the geographic area served by that set of facilities (“service area”),
- the measure of demand on those facilities (“service unit”),
- the amount of demand generated by a unit of development for a particular land use type (“demand schedule”),
- the cost per service unit to accommodate new development at the appropriate level of service,
- the amount by which the cost per service unit should be reduced to account for future revenues attributable to new development that will pay for the same facilities or existing deficiencies (known as “revenue credits”), and
- the combination of the components to produce the impact fee schedule.

While it gets more complicated in its application, the basic impact fee formula is simple. The cost per service unit is reduced by the revenue credit per service unit to determine the net cost per service unit, which is then multiplied by the number of service units generated by a land use per development unit (e.g., dwelling, 1,000 square feet of building area) to determine the net cost per development unit.

Level of Service

The most important legal principle for impact fee methodology is related to the concept of “level of service.” Level of service (LOS) is critical in the determination of the appropriate cost per service unit and revenue credit per service unit. Impact fees should not charge new development for a higher LOS than is provided to existing development. This principle recognizes that public infrastructure provides a shared level of service to all development within a service area. Both new and existing development in the service area will have access to any improvement funded with impact fees paid by new development. If impact fees are based on a desired level of service that is higher than is being provided to existing development, new development would bear a disproportionate share of the cost of raising the LOS. If impact fees are the only revenue source used to fund capital improvements, new development would pay impact fees that would be used both to maintain the same LOS paid for by existing development, as well as to raise the LOS, which would benefit existing development as well as new development.

Generally speaking, level of service is the ratio of the capacity of the facilities to the demand for those facilities. Examples of common levels of service are vehicle-miles of capacity per vehicle-mile of travel, park acres per 1,000 population, and water treatment capacity (gallons per day) per daily gallon of water consumption. However, while level of service is an indispensable concept in impact fee analysis, attempts to quantify it in terms of physical ratios of capacity to demand are not always appropriate. Capacity can be more precisely determined for so-called “hard” facilities, such as roads, water, wastewater, and drainage infrastructure, than for so-called “soft” facilities, such as parks, libraries, fire, police, and general government facilities. For these types of facilities, more capital

investment generally equates to a better level of service. Level of service is an important concept in impact fee law and methodology. However, trying to quantify it in terms of physical ratios is not always necessary or appropriate.

Types of Methodology

Impact fee methodologies are classified based on how the cost per service unit is calculated. Impact fee calculations also require consideration of possible revenue credits, and that is discussed in the Legal Framework chapter. There are two primary types of methodologies, which can be referred to as “standards-based” and “plan-based.” The standards-based methodology is calculated based on a generalized level-of-service (LOS) standard. The plan-based approach methodology, as the name implies, is based on a plan and an identified set of improvements. The plan-based approach relies on the master plan to establish the nexus between anticipated growth and the need for the identified improvements. Many master plans are not adequate to support such a methodology. This study employs the standards-based approach.

A standards-based methodology typically uses a generalized level of service standard, such as number of park acres per 1,000 residents, to determine the costs to accommodate new development. This approach does not require that there be a master plan, or even a list of specific planned projects that will be funded with the impact fees. Most often, the standards-based approach uses the actual level of service (LOS) that exists at the time the study is prepared. In its simplest form, the standards-based approach divides the replacement cost of existing facilities by the existing development being served by those facilities to determine the cost per service unit. In essence, the cost to maintain the existing LOS is defined as the existing investment in capital facilities per service unit currently using those facilities. In many cases, physical or quasi-physical LOS ratios are used as intermediary factors, but the resulting fee is the same. The two major variants of the standards-based methodology – “incremental expansion” and “consumption-based” – are described below.

Incremental Expansion. When the cost per service unit is based on the existing LOS, this approach is sometimes referred to as “incremental expansion.” The basic assumption is that it will be necessary to expand capital facilities proportional to growth. Basing the fees on the existing LOS assumes that there is little or no excess capacity in existing facilities to accommodate future growth. However, a standards-based methodology can also be based on a LOS that is lower or higher than the current existing LOS. When there is a significant amount of excess capacity, a lower-than-existing LOS may be used. For soft facilities for which capacity is difficult to measure, the incremental expansion approach is almost always used.

Consumption-Based. For hard facilities such as transportation, the most common standards-based approach is often referred to as “consumption-based.” This approach charges a new development the cost required to replace the capacity it will consume in the system. In essence, instead of dividing the cost of all existing facilities by the existing demand units being served, as is typically done for soft facilities, only the cost of the existing facility capacity being consumed by existing development is used as the numerator. The reason for this difference is that the hard facilities tend to have measurable excess capacity.

The consumption-based approach for transportation impact fees uses travel miles as the service unit rather than trips. One can't determine the cost of trip capacity without including the distance component. The cost of adding capacity for a trip to a 5-mile road segment will be roughly five-times the cost to add capacity for one trip on a 1-mile segment. So the service unit of choice is a mile of travel. This can refer to either vehicle-miles or person-miles. Most transportation impact fee studies continue to be based on vehicle-miles because the data on vehicular trips is so much more robust than it is for bike/ped or other modes of travel.

Summary. There are two basic impact fee methodologies: standards-based and plan-based. This study uses the standards-based approach. The consumption-based variant is used to calculate the updated transportation impact fees, and the incremental expansion variant is used for the new parks and general government fees. These are the most commonly-used methodologies in Florida for these types of facilities.

TRANSPORTATION

The purpose of this chapter is to update City's transportation impact fees. The City currently assesses transportation impact fees for residential uses only, based on an ordinance adopted in 2005. This update proposes to assess nonresidential uses as well. To make the calculations easier to follow, numbers in one table that are inputs into another table are highlighted in red.

Major Roadway System

A transportation impact fee program should include a clear definition of the major roadway system that is to be funded with impact fees. For the purposes of this study, the major roadway system is defined as all arterial and collector roads within the city limits. An inventory of existing arterial and collector roads within the city limits is presented in Table 3. It provides a description of each major road segment, including ownership, functional classification, number of lanes, segment length in miles, average daily traffic, and generalized daily capacity. Judge, Daetwyler, Seminole and McCoy are two-lane major collector roads that were deeded to the City by the County on April 7, 2021. Hoffner Avenue is a two-lane County minor arterial. The major roads in the vicinity of Belle Isle are shown on the functional classification map in Figure 1 on the following page.

Table 3. Major Roadway Inventory

Street	Segment Description	Juris. diction	Func. Class	Lns	Miles	Daily Trips	VTM	Capa- city	VMC
Judge Rd	S Conway Rd-Conway Lakes Dr	City	Coll.	2	0.34	20,700	7,038	13,200	4,488
Daetwyler Dr	Conway Lakes Dr-McCoy Rd	City	Coll.	2	1.16	12,300	14,268	13,200	15,312
Hoffner Ave	S Conway Rd-Oak Island Rd	County	Art.	2	1.51	17,631	26,623	13,200	19,932
Hoffner Ave	Oak Island Rd-La Belle St	County	Art.	2	0.87	12,142	10,564	13,200	11,484
Nela Ave	Matchett Rd-Seminole Dr	City	Coll.	2	1.15	1,950	2,243	13,200	15,180
Seminole Dr	Nela Ave-Daetwyler Dr	City	Coll.	2	0.46	1,950	897	13,200	6,072
McCoy Rd	Daetwyler Dr-Via Flora	City	Coll.	2	0.38	12,300	4,674	13,200	5,016
Total					5.87		66,307		77,484

Source: Street and segment description and segment length in miles from City of Belle Isle; functional classification from Florida Department of Transportation (FDOT), *Roadways on the Federal Aid System*, Orange County Map No. F06, May 2010; average daily trips from recent studies provided by the City of Belle Isle and FDOT traffic count map accessed July 7, 2021; generalized daily capacity at LOS D from FDOT *Quality/Level of Service Handbook*, 2020 for non-state signalized class II roadways in urban areas; vehicle-miles of travel (VTM) is miles times AADT; vehicle-miles of capacity (VMC) is miles times capacity.

The major purpose of the inventory is to ensure that the travel demand factors for individual land uses in the fee schedule are calibrated to the actual travel observed on the city's major roadway system. A secondary purpose is to ensure that the level of service (LOS) implicit in the standard consumption-based transportation impact fee methodology does not exceed the actual LOS on the major roadway system. The LOS in the standard consumption-based methodology (see Methodology chapter for more explanation) is measured in terms of the system-wide ratio of 1.0 between vehicle-miles of capacity (VMC) and vehicle-miles of travel (VTM) on the major roadway system. There are no existing deficiencies, evidenced by a an existing VMC/VTM ratio significantly greater than one – see Table 4 on the following page.

Table 4. Existing Roadway System Level of Service

VMC on Major Road System	452,861
÷ VMT on Major Road System	222,023
VMC per VMT	2.04

Source: Table 3.

Figure 1. Functional Classification Map



Service Unit

In an impact fee analysis, various types of development must be translated into a common unit of measurement, called a service unit. The service unit for transportation is expressed in terms of daily vehicle-miles of travel (VMT). VMT is the product of three factors: 1) trip generation, 2) percent new trips and 3) trip length in miles.

Trip Generation. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single one-way trip from home to work counts as one trip end for the residence and one trip end for the workplace, for a total of two trip ends. To avoid double-counting travel, trip rates are divided by two. The daily trip generation rates used in this study are from the Institute of Transportation Engineers' (ITE), *Trip Generation* manual, 10th edition, published in 2017.

New Trips. The trip rates are also adjusted by a “new trip factor” to exclude pass-by and diverted-link trips. This adjustment reduces the possibility of over-counting trips by including only primary trips generated by the development. Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a particular development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A pass-by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted-link trip is similar to a pass-by trip, but a diversion is made from the regular route to make an interim stop. The new trip factors are based on the most recent ITE *Trip Generation Manual*.

Trip Length. The average trip length is the most difficult travel demand factor to determine. In the context of a transportation impact fee using a consumption-based methodology, the relevant input is the average length of a trip on the jurisdiction’s major roadway system. This varies significantly between jurisdictions based on the size and shape of the jurisdiction and layout of the jurisdiction’s major roads. The starting point for determining average trip lengths by land use is national data. While these average trip lengths provide reasonable estimates of relative magnitudes associated with different land use types, the actual distances are likely to be unrepresentative of travel on Belle Isle’s major roadway system. To account for this, an adjustment factor is derived by dividing the VMT actually observed on the major roadway system by the VMT that would be expected using national average trip lengths.

The first step in developing the adjustment factor for the local trip length is to estimate the total VMT that would be expected on the major roadway system based on national average trip lengths by land use type. Existing land uses in the city are multiplied by trip generation rates, percent new trips and average trip lengths and summed to estimate total city-wide VMT. As shown in Table 5, existing land uses within the city, using national trip generation data and trip length data, would be expected to generate 148,781 VMT per day on the major roadway system.

Table 5. Expected Vehicle-Miles of Travel

Land Use Category	Unit	Existing Units	Trip Rate	% New	Miles	Total VMT
Single-Family Detached	Dwelling	2,508	4.72	100%	8.75	103,580
Multi-Family	Dwelling	340	3.66	100%	8.75	10,889
Retail/Commercial	1,000 sq. ft.	373	18.87	43%	7.03	21,277
Office	1,000 sq. ft.	162	4.87	100%	9.76	7,700
Industrial/Warehouse	1,000 sq. ft.	0	0.87	100%	11.28	0
Public/Institutional	1,000 sq. ft.	248	3.32	100%	6.48	5,335
Total Expected Vehicle-Miles of Travel (VMT)						148,781

Source: Existing units from Table 27 in the Appendix; trip rate and percent new trips from recommended travel demand schedule in Table 8; average trip lengths from 2017 National Household Travel Survey; VMT is products of units, trip rate, % new trips, and trip length in miles.

The next step in developing the local trip length adjustment factor is to compare the expected VMT using national average trip lengths to actual daily VMT on the major roadway system, as shown in Table 6. Expected VMT based on existing land uses and national travel demand characteristics over-

estimates VMT actually observed on the City's major roadway system. Consequently, the national average trip lengths will be adjusted downward by the local adjustment factor calculated below.

Table 6. Comparison of Expected to Actual Vehicle-Miles of Travel

Actual Daily VMT on Major Road System	66,307
÷ Expected Daily VMT on Major Road System	148,781
Ratio of Actual to Expected VMT	0.446

Source: Actual local VMT from Table 3; expected VMT from Table 5.

Applying the local adjustment factor calculated above to the national average trip lengths results in the recommended average trip lengths by land use for Belle Isle shown in Table 7.

Table 7. Local Average Trip Lengths by Land Use

Land Use Type	National Avg. Trip Length	Local Adjustment Factor	Local Avg. Trip Length
Single-Family Detached	8.75	0.446	3.90
Multi-Family	8.75	0.446	3.90
Retail/Commercial	7.03	0.446	3.14
Office	9.76	0.446	4.35
Industrial/Warehouse	11.28	0.446	5.03
Public/Institutional	6.48	0.446	2.89

Source: National average trip lengths from Table 5; local adjustment factor from Table 6.

Service Unit Summary. The result of combining trip generation rates, new trip factors, and local average trip lengths is a travel demand schedule that establishes the vehicle-miles of travel (VMT) during the average weekday generated by various land use types per unit of development in Belle Isle. The daily VMT generation rates are summarized in Table 8.

Table 8. Transportation Service Units by Land Use

Land Use Category	Unit	ITE Code	Trip Rate	% New	Trip Length	VMT/ Unit
Single-Family Detached	Dwelling	210	4.72	100%	3.90	18.41
Multi-Family	Dwelling	220	3.66	100%	3.90	14.27
Retail/Commercial	1,000 sq. ft.	820	18.87	43%	3.14	25.48
Office	1,000 sq. ft.	710	4.87	100%	4.35	21.18
Industrial/Warehouse	1,000 sq. ft.	110	0.87	100%	5.03	4.38
Public/Institutional	1,000 sq. ft.	620	3.32	100%	2.89	9.59

Source: Daily trips are 1/2 daily trip ends from Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th edition, 2017; percent new trips for retail from ITE Manual for shopping centers; trip lengths from Table 7; daily VMT (vehicle-miles of travel) is the product of trip rate, percent new trips, and average trip length.

Cost per Service Unit

The cost of expanding the capacity of the major roadway system is generally measured for projects that widen existing roadway by adding lanes or by building new roads. Transportation capacity can also be expanded in ways that are less easily quantified in terms of vehicular capacity, such as intersection, signalization, and bicycle/pedestrian improvements, but the capacity added by such improvements is more difficult to quantify. Standard practice is to base the cost per service unit on the average cost of constructing a lane-mile divided by the average capacity per lane.

The City of Belle Isle does not have any recent cost information related to constructing new or widened roadways. The most localized data is available for Orange County projects. The County's most recent 2020 transportation impact fee study analyzed a set of recent County road improvements and determined the average cost per lane-mile, including design, construction and right-of-way, as well as the average capacity per lane added. To take into consideration that improvements to major roads in the city may be less costly, the County cost per lane-mile is reduced by 50 percent. The resulting cost per service unit is \$252 per vehicle-mile of capacity, as shown in Table 9.

Table 9. Transportation Cost per Service Unit

County Average Cost per Added Lane-Mile	\$4,540,000
x Percentage Assumed for City	50%
Assumed City Cost per Added Lane-Mile	\$2,270,000
÷ Average Capacity Added per Lane	9,000
City Cost per Vehicle-Mile of Capacity (VMC)	\$252

Source: County average cost per lane-mile and capacity per new lane from Tindale Oliver, *Orange County Transportation Impact Fee Update Study*, September 2020, Table 3; City cost percentage assumed.

Net Cost per Service Unit

This section calculates appropriate revenue credits to account for future revenue generated by new development that will be used to pay for the same level of service that will be provided by transportation impact fees. There are no existing deficiencies because the impact fees are based on a lower level of service (VMC/VMT ratio of one) than that currently provided to existing development. The City does not have any outstanding debt related to past capacity-expanding transportation improvements.

A credit for State and Federal transportation funding recognizes planned expenditures to improve major roads in the city over the next five years included in the current regional transportation improvement program (TIP). Only one such project is included in the current TIP. The annual amount of such funding per service unit over this period is assumed to continue for the long term, quantified as 30 years. The net present value of these annual amounts over the next 30 years is the State/Federal funding credit per service unit of \$74 per VMT shown in Table 10.

Table 10. State/Federal Funding Credit

Hoffner Ave/Nela Ave Bike/Ped Safety Study	\$1,000,000
Total Five-Year Funding, FY 2022-2026	\$1,000,000
÷ Number of Years	5
Annual State Transportation Funding	\$200,000
÷ Existing Daily VMT on Major Road System	66,307
Annual Transportation Funding per VMT	\$3.02
x Present Value Factor (over 30 years)	24.36
Transportation Funding Credit per VMT	\$74

Source: Five-year funding from MetroPlan Orlando, FY 2021/22 – 2025-26 Orlando Urban Area Transportation Improvement Program, adopted July 7, 2021; existing VMT from Table 3; present value factor based on discount rate of 1.40%, which is the average 30-year AAA municipal bond yield reported by fmsbonds.com on July 18, 2021.

The net cost to accommodate new development's impact on the major roadway system is the cost per service unit less the State/Federal revenue credit per service unit. This yields a net cost of \$178 per vehicle-mile of travel, as summarized in Table 11.

Table 11. Transportation Net Cost per Service Unit

Transportation Cost per VMT	\$252
– State/Federal Funding Credit per VMT	-\$74
Transportation Net Cost per VMT	\$178

Source: Cost per VMT is same as cost per VMC from Table 9; State/Federal credit from Table 10.

Net Cost Schedule

The final calculation for transportation impact fees is to multiply the daily vehicle-miles of travel (VMT) generated by a unit of development by the net cost per VMT. The transportation impact fee calculation is shown in Table 12.

Table 12. Transportation Net Cost Schedule

Land Use	Unit	VMT/ Unit	Net Cost/ VMT	Net Cost per Unit
Single-Family Detached	Dwelling	18.41	\$178	\$3,277
Multi-Family	Dwelling	14.27	\$178	\$2,541
Retail/Commercial	1,000 sq. ft.	25.48	\$178	\$4,535
Office	1,000 sq. ft.	21.18	\$178	\$3,771
Industrial/Warehouse	1,000 sq. ft.	4.38	\$178	\$779
Public/Institutional	1,000 sq. ft.	9.59	\$178	\$1,708

Source: VMT per unit from Table 8; net cost per VMT from Table 11; net cost per unit is product of VMT per unit and net cost per unit.

The County's current transportation impact fees for residential uses were adopted in 2005 and have not been updated for 15 years. Table 13 shows the comparison between the current and updated study maximum fees. The updated maximum single-family fee would increase more than the multi-family fee. Note that a percentage increase cannot be calculated for nonresidential uses, because a number cannot be divided by zero.

Table 13. Change in Transportation Impact Fees

Land Use Category	Unit	Current Fee	Updated Fee	Change	Percent Change
Single-Family Detached	Dwelling	\$1,431	\$3,277	\$1,846	129%
Multi-Family	Dwelling	\$1,431	\$2,541	\$1,110	78%
Retail/Commercial	1,000 sq. ft.	n/a	\$4,535	\$4,535	n/a
Office	1,000 sq. ft.	n/a	\$3,771	\$3,771	n/a
Industrial/Warehouse	1,000 sq. ft.	n/a	\$779	\$779	n/a
Public/Institutional	1,000 sq. ft.	n/a	\$1,708	\$1,708	n/a

Source: Current fees from Exhibit "A" to Ord.-05=06, adopted April 5, 2005; updated fees from Table 12.

The impact fee phasing requirements recently enacted by HB 337 apply to increases from existing fees, based on the percentage by which the fees are increased. Fees can only be increased once every four years, and may not be increased more than 50%. Increases of more than 25% but no more than 50% must be phased in over four years in equal annual increments.

The statute allows the cap on increases and the phasing requirements to be exceeded, provided the jurisdiction establishes the need for such increase in excess of what would otherwise be authorized is completed within 12 months before the adoption of the impact fee increase that expressly demonstrates the extraordinary circumstances necessitating the need to exceed the phase-in limitations. The local government jurisdiction must hold at least two publicly noticed workshops dedicated to the extraordinary circumstances, and adopt the ordinance with at least a two-thirds vote of the governing body. What qualifies as extraordinary circumstances is not clear, but the fact that the fees have not been updated in over 15 years could reasonably qualify.

In the event that the City decides not to pursue that option, a suggested phasing schedule is provided in Table 14 on the following page. Impact fees must also be proportionally related to impact, meaning the fees for all land uses should be assessed at the same percentage of the maximum fee. As discussed in the Legal Framework chapter, a reasonable approach is to temporarily vary from a strict application of proportionality during a four-year phase-in, while ensuring that the fee for each land use is assessed at the same percentage of the maximum fee in the fourth year. While no phase-in is required for the new nonresidential fees, those fees would be capped by the same assessment percentage as single-family, which would have the lowest assessment rate because it is increasing by the largest percentage. After the allowed 50% increase, the single-family fee would be assessed at 65.52% of the updated maximum fee by year four. Nonresidential and multi-family fees would also need to be assessed at no more than that percentage during the fourth year to return to proportionality. Multi-family fees would need to be phased in over two years. No phasing is required for the new nonresidential fees, and those could be assessed at 65.52% in the first year. However, the general requirement to "provide notice at least 90 days before the effective date of an ordinance or resolution imposing a new or increased impact fee" would apply to the new nonresidential fees as well.

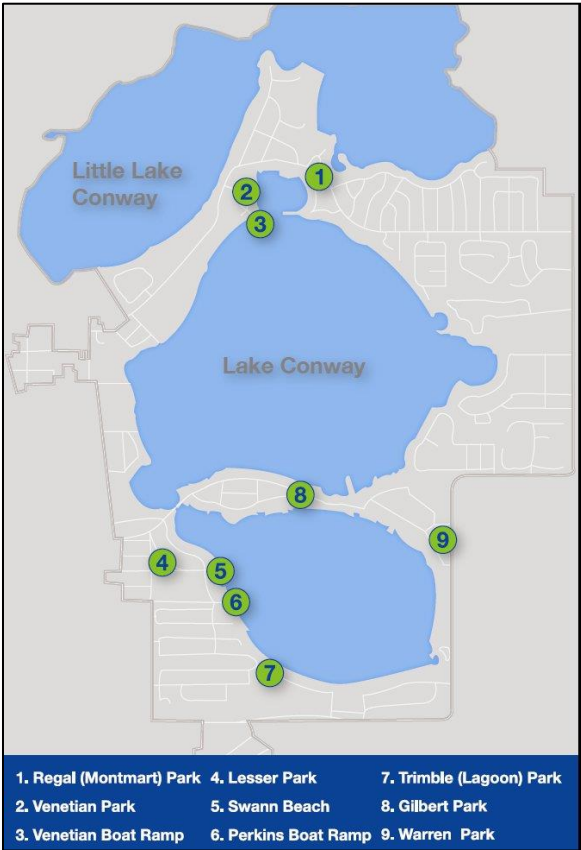
Table 14. Suggested Transportation Phasing Schedule

Land Use	Unit	Current Fee	Recommended Phasing Schedule				Updated Fee
			Year 1	Year 2	Year 3	Year 4	
Single-Family Detached	Dwelling	\$1,431	\$1,610	\$1,789	\$1,968	\$2,147	\$3,277
Multi-Family	Dwelling	\$1,431	\$1,490	\$1,549	\$1,608	\$1,665	\$2,541
Retail/Commercial	1,000 sq. ft.	n/a	\$2,971	\$2,971	\$2,971	\$2,971	\$4,535
Office	1,000 sq. ft.	n/a	\$2,471	\$2,471	\$2,471	\$2,471	\$3,771
Industrial/Warehouse	1,000 sq. ft.	n/a	\$510	\$510	\$510	\$510	\$779
Public/Institutional	1,000 sq. ft.	n/a	\$1,119	\$1,119	\$1,119	\$1,119	\$1,708
Annual Change							
Single-Family Detached	Dwelling		\$179	\$179	\$179	\$179	
Multi-Family	Dwelling		\$59	\$59	\$59	\$57	

PARKS

The City provides public parks for the enjoyment of its residents. The location of existing City parks is illustrated in Figure 2. The City’s current parks are mostly small amounts of open space, many of which provide access to the lakes for swimming or boating. Some are patches of excess street right-of-way with minimal improvements other than irrigation and landscaping. This chapter calculates the net cost to accommodate new residential development at the existing park level of service. To make the calculations easier to follow, numbers in one table that are inputs into another table are highlighted in red.

Figure 2. Existing City Park Locations



Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for park facilities. This unit of measurement is called a “service unit.” The service unit for park impact fees is the “equivalent dwelling unit” or EDU, which represents the impact of a typical single-family detached dwelling. By definition, a typical single-family unit represents one EDU. Other types of units each represent a fraction of an EDU, based on their relative household sizes.

Demand for park facilities is proportional to the number of people in a dwelling unit. Consequently, data on average household size for various types of units is a critical component of park demand. These data are presented and analyzed in the Appendix and are used to develop the EDU multipliers for Belle Isle's park impact fee. The relative EDUs associated with each housing type are shown in Table 15.

Table 15. Park Equivalent Dwelling Unit Multipliers

Housing Type	Average Household Size	EDUs/Unit
Single-Family Detached	2.92	1.00
Multi-Family	2.57	0.88

Source: Average household size from Table 28 in the Appendix; multi-family EDUs are the ratio to single-family average household size.

To determine the existing level of service, it is necessary to estimate the total number of service units in the city. Data on existing units by housing type is presented in the Appendix. To determine the total EDUs for the purpose of the park impact fee, the numbers of existing dwelling units of each housing type are multiplied by the appropriate EDUs per unit and the results for all housing types are summed. As shown in Table 16, there are currently 2,807 park service units (EDUs) city-wide.

Table 16. Existing Park Service Units

Housing Type	Total Units	EDUs/Unit	Total EDUs
Single-Family Detached	2,508	1.00	2,508
Multi-Family	340	0.88	299
Total	2,848		2,807

Source: EDUs per unit from Table 15; existing units from Table 27 in the Appendix.

Cost per Service Unit

This study uses the “incremental expansion” methodology for the park impact fee calculations (see Methodology chapter for more explanation). It bases the park impact fee on the existing level of service, and measures that level of service in terms of the ratio of the replacement value of existing facilities to existing residential development. Land acquisition and related site improvements are significant costs related to park facilities. The City's most recent acquisition was the purchase of 2.4 acres for Wallace Field in 2016 for \$0.83 million. Land and improvement costs are based on original costs. An inventory of the City's land and improvement values are summarized in Table 17 on the following page.

Table 17. Existing Park Facility Inventory

Park Name	Facility Type	Acres	Estimated Current Value		
			Land	Imprvmnts	Total
Swann Beach	Swimming Beach/Bench	0.25	n/a	\$21,585	\$21,585
Delia Beach	Swimming Beach/Bench	0.22	n/a	\$411,000	\$411,000
LaBelle Beach	Swimming Beach/Bench	0.31	n/a	\$25,000	n/a
Cross Lake Beach	Swimming Beach/Bench	0.16	\$260,000	n/a	\$260,000
Perkins Boat Ramp	Boat Launch Ramp	0.33	n/a	\$80,374	\$80,374
Venetian Park	Boat Launch Ramp/OS	1.93	n/a	n/a	n/a
Wallace Field	Undeveloped Open Space	2.40	\$830,000	n/a	\$830,000
New Open Space	Open Space	4.03	\$403,067	n/a	\$403,067
Trimble Park	Open Space/Picnic Area	n/a	n/a	\$25,000	\$25,000
Regal Park	Fountain/Benches/Lights	0.51	\$50,000	\$65,000	\$115,000
Peninsular Park	Open Space/Benches	n/a	n/a	\$15,000	\$15,000
Gilbert Park	Open Space/Irrigation	n/a	n/a	\$15,000	\$15,000
Lesser Park	Open Space/Irrigation	n/a	n/a	\$15,000	\$15,000
Conway Circle Park	Open Space/Bench	n/a	n/a	n/a	n/a
Holloway Park	Open Space on City Hall Site	n/a	n/a	n/a	n/a
Total		10.14	\$1,543,067	\$672,959	\$2,191,026

Source: Acres and improvements costs are original costs from City of Belle Isle, July 9, 2021.

As shown in Table 18, the cost to maintain the existing level of service is \$781 per EDU.

Table 18. Park Cost per Service Unit

Total Park Land and Improvement Value	\$2,191,026
÷ Existing Park Service Units (EDUs)	2,807
Park Cost per Service Unit	\$781

Source: Park value from Table 17; park EDUs from Table 16.

Net Cost per Service Unit

The City funds park land and improvements entirely from the general fund. It does not have any outstanding debt related to existing parks, nor has it received any State or Federal grants for park improvements in recent years. There are no existing deficiencies, because the proposed impact fees are based on the existing level of service. To the extent that general revenues are used for park improvements after impact fees are assessed, those improvements will raise the level of service for both existing and new development. Consequently, no revenue credits are warranted for taxes that will be paid by new residential development. The net cost per service unit is therefore the same as the cost per service unit calculated above.

Net Cost Schedule

The maximum parks and recreation impact fees that can be adopted by the City based on this study are derived by multiplying the EDUs associated with each dwelling unit type by the net cost per EDU, as shown in Table 19.

Table 19. Park Net Cost Schedule

Housing Type	EDUs/ Unit	Net Cost/ EDU	Net Cost/ Unit
Single-Family Detached	1.00	\$781	\$781
Multi-Family	0.88	\$781	\$687

Source: EDUs per unit from Table 15; net cost per EDU is cost per EDU from Table 18.

The impact fee phasing requirements recently enacted by HB 337 apply to increases from existing fees, based on the percentage by which the fees are increased. They do not apply to new fees. The City does not currently assess impact fees for parks. It is not mathematically possible to calculate a percentage increase from zero. No phasing of the proposed park impact fees is required beyond the requirement to “provide notice at least 90 days before the effective date of an ordinance or resolution imposing a new or increased impact fee.”

GENERAL GOVERNMENT

The City of Belle Isle provides a variety of buildings and equipment used to deliver general government services to businesses and residents that are not included in other impact fee program areas, such as the transportation impact fee or the proposed park impact fee. The City's existing general government capital improvements consist of administrative and maintenance facilities, as well as police facilities. This chapter calculates a potential general government impact fee based on the existing level of service. To make the calculations easier to follow, numbers in one table that are inputs into another table are highlighted in red.

Service Unit

The "functional population" approach is one of the few techniques used in impact fee studies to estimate the demand for general government facilities. To a large extent, the demand for these facilities is proportional to the presence of people. This section describes how functional population service units are determined for each land use type, and calculates the total number of existing service units in the city.

Functional population represent the number of full-time equivalent people at a land use, based on the observation that demand for general government facilities tends to be proportional to the number of people. Functional population is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use, and it is used for the purpose of determining the impact of a particular development on the need for facilities. For residential development, functional population is average household size times the percent of time people spend at home. For nonresidential development, functional population is based on a formula that includes trip generation rates, average vehicle occupancy and average number of hours spent by visitors at a land use.

Residential Functional Population. For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types in terms of either average household size (average number of persons per occupied dwelling unit) or persons per unit (average number of persons per dwelling unit, including vacant as well as occupied units). In this analysis, average household size is used to develop the functional population multipliers, as it avoids the need to make assumptions about occupancy rates.

The first step is to determine the percentage of time people spend at their place of residence. In 2018, the U.S. Bureau of Labor Statistics interviewed one person each from 9,600 randomly-selected households to determine how people spent their time during a recent day. Survey respondents were limited to persons aged 15 or older in the civilian population. The survey determined the average number of hours spent on various types of activities. While it did not itemize where the activities occurred, reasonable assumptions have been made about which activities were more likely to take place at the place of residence or away from home. The results, summarized in Table 20, indicate that people spend on average two-thirds of each 24-hour day at their place of residence.

Table 20. Time Usage Survey

Primary Activity	Total Hrs. per Day	At Home	Away
Sleeping (including naps, spells of sleeplessness)	8.82	8.82	–
Personal care activities (other than sleeping)	0.76	0.76	–
Eating and drinking*	1.19	0.89	0.30
Household activities	1.78	1.78	–
Purchasing goods and services	0.72	–	0.72
Caring for and helping household members	0.51	0.51	–
Caring for and helping non-household members	0.21	–	0.21
Working and work-related activities	3.57	–	3.57
Educational activities	0.46	–	0.46
Organizational, civic and religious activities	0.30	–	0.30
Watching television	2.84	2.84	–
Other leisure and sports	2.43	–	2.43
Telephone, mail and email	0.15	0.15	–
Other activities	0.26	0.26	–
Total Hours	24.00	16.01	7.99
Percent of Time	100.0%	66.7%	33.3%

* estimates 75% of meals eaten at home

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, *American Time Use Survey - 2018 Results*, June 19, 2019 news release, Table 1: Time spent in primary activities per day, civilian population 15 years or older, 2018 annual averages; time at home or away is estimated.

Based on these data, it is estimated that people spend about two-thirds of their time at home and the rest of each 24-hour day away from their place of residence. The functional population per unit for residential uses is shown in Table 21.

Table 21. Residential Functional Population per Unit

Housing Type	Unit	Average HH Size	Occu- pancy	Func. Pop./Unit
Single-Family Detached	Dwelling	2.92	66.7%	1.948
Multi-Family	Dwelling	2.57	66.7%	1.714

Source: Average household size from Table 28 in the Appendix; percent of time at home from Table 20

Nonresidential Functional Population. The functional population methodology for non-residential uses starts with trip generation rates. The number of daily trips is multiplied by the average vehicle occupancy to determine the total number of persons going to the site each day. The number of employees is estimated from average employee densities. Visitors are the remainder of persons going to the site. Employees are estimated to spend eight hours per day at their place of employment, and visitors are estimated to spend one hour per visit. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. The formula used to derive the nonresidential functional population estimates is summarized in Figure 3.

Figure 3. Nonresidential Functional Population Formula

$$\text{Functional population/1000 sf} = (\text{employee hours/1000 sf} + \text{visitor hours/1000 sf}) \div 24 \text{ hours/day}$$

Where:

$$\text{Employee hours/1000 sf} = \text{employees/1000 sf} \times 8 \text{ hours/day}$$

$$\text{Visitor hours/1000 sf} = \text{visitors/1000 sf} \times 1 \text{ hour/visit}$$

$$\text{Visitors/1000 sf} = \text{weekday ADT/1000 sf} \times \text{avg. vehicle occupancy} - \text{employees/1000 sf}$$

$$\text{Weekday ADT/1000 sf} = \text{one way average daily trips (total trip ends} \div 2)$$

Using this formula and trip generation rates from the *Trip Generation Manual*, vehicle occupancy rates from the *National Household Travel Survey* and employee densities from the U.S. Department of Energy, nonresidential functional population estimates per 1,000 square feet of gross floor area are calculated. Table 22 presents the results of these calculations for the proposed nonresidential land use categories.

Table 22. Nonresidential Functional Population per Unit

Land Use	Unit	Trip Rate	Persons/Trip	Employees/Unit	Visitors/Unit	Functional Pop./Unit
Retail/Commercial	1,000 sq. ft.	18.87	1.97	0.93	36.25	1.820
Office	1,000 sq. ft.	4.87	1.29	2.07	4.21	0.865
Industrial/Warehouse	1,000 sq. ft.	0.87	1.29	0.48	0.32	0.173
Public/Institutional	1,000 sq. ft.	3.47	2.07	0.43	6.74	0.424

Source: Trip rates are one-half daily trip ends during a weekday from Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th ed., 2017 (retail/commercial based on shopping center, office based on general office, industrial/warehouse based on warehouse, public/institutional based on church); persons/trip is average vehicle occupancy by trip purpose from Federal Highway Administration, *Nationwide Household Travel Survey*, 2017 for state of Florida (retail/commercial based on shopping, office and industrial/warehouse based on home-to-work, public/institutional based on family/personal); employees/unit from U.S. Department of Energy, *Commercial Buildings Energy Consumption Survey*, 2012; visitors/unit is trips times persons/trip minus employees/unit; functional population/unit calculated based on formula in Figure 3.

Functional Population Summary. The functional population multipliers for the residential and nonresidential land use categories are summarized in Table 23 below. Multiplying the multipliers by the amount of existing development for each land use type and summing for all land uses results in a current estimate of 6,393 functional population city-wide.

Table 23. Functional Population Summary

Land Use	Unit	Functional Pop./Unit	Existing Units	Total Func. Pop.
Single-Family Detached	Dwelling	1.948	2,508	4,886
Multi-Family	Dwelling	1.714	340	583
Retail/Commercial	1,000 sq. ft.	1.820	373	679
Office	1,000 sq. ft.	0.865	162	140
Industrial/Warehouse	1,000 sq. ft.	0.173	0	0
Public/Institutional	1,000 sq. ft.	0.424	248	105
Total Functional Population				6,393

Source: Functional population per unit from Table 20 (residential) and Table 22 (nonresidential).; existing units from Table 27 in the Appendix;

Cost per Service Unit

This study uses the “incremental expansion” methodology to determine the cost per service unit for the general government impact fee (see Methodology chapter for more explanation). The existing level of service used in developing the impact fees is quantified as the ratio of the replacement value of existing facilities to existing service units (functional population). The existing general government facilities and their replacement values are shown in Table 24. The building replacement costs are based on the City’s insured values. Land values are based on original cost.

Table 24. General Government Building and Land Cost

Asset	Address	Acres	Building Sq. Feet	Land Value	Building Value
City Hall	1600 Nela Ave	0.49	3,642	\$82,583	\$1,050,246
Public Works	6916 Sunny Ln Ave	0.27	2,519	\$53,389	\$213,313
Police Dept.	1521 Nela Ave	0.27	2,057	\$80,000	\$494,624
Total, General Government Buildings			8,218	\$215,972	\$1,758,183

Source: Facility name and address, acres, building square feet, and land cost from City of Belle Isle; building value based on City’s insured values, April 29, 2021.

The cost per service unit based on the existing level of service can be determined by dividing the replacement cost of existing general government buildings, land, and vehicles and equipment with a useful life of at least five years (except for police vehicles, which have a useful life of about three years) by existing functional population. As shown in Table 25, the replacement value of the existing general government capital assets is about \$3.4 million. Dividing the replacement cost by existing service units yields a cost per service unit of \$526 per functional population.

Table 25. General Government Cost per Service Unit

Building Cost	\$1,758,183
Land Cost	\$215,972
Police Vehicle and Equipment Cost	\$1,076,512
Other Vehicle and Equipment Cost	\$308,943
Total General Government Replacement Cost	\$3,359,610
÷ Existing Functional Population	6,393
General Government Cost per Functional Population	\$526

Source: Building and land costs from Table 24; vehicle and equipment costs are original costs from the City's fixed assets records; existing functional population from Table 23.

Net Cost per Service Unit

Impact fees should be reduced to account for future funding that will be generated by new development and used to remedy existing deficiencies or to retire outstanding debt on facilities that serve existing development. As with the other fee calculations in this report, the updated fees are based on the existing level of service and there are no deficiencies. The City does not have any outstanding debt and has not received any grant funding in recent years for general government facilities. Consequently, no additional revenue credits are warranted, and the net cost per service unit is the same as the cost per service unit calculated in the previous section.

Net Cost Schedule

The maximum general government impact fees that can be adopted based on this study are derived by multiplying the number of service units (functional population) represented by each development unit by the net cost per service unit, as shown in Table 26.

Table 26. General Government Net Cost Schedule

Land Use Type	Unit	Func. Pop. per Unit	Net Cost/ Func. Pop.	Net Cost/ Unit
Single-Family Detached	Dwelling	1.95	\$526	\$1,025
Multi-Family	Dwelling	1.71	\$526	\$902
Retail/Commercial	1,000 sq. ft.	1.82	\$526	\$957
Office	1,000 sq. ft.	0.87	\$526	\$455
Industrial/Warehouse	1,000 sq. ft.	0.17	\$526	\$91
Public/Institutional	1,000 sq. ft.	0.42	\$526	\$223

Source: Functional population per unit from Table 23; net cost per functional population is the same as the cost per functional population from Table 25.

The impact fee phasing requirements recently enacted by HB 337 apply to increases from existing fees, based on the percentage by which the fees are increased. They do not apply to new fees. The City does not currently assess impact fees for general government facilities. It is not mathematically possible to calculate a percentage increase from zero. No phasing of the proposed general government impact fees is required beyond the requirement to “provide notice at least 90 days before the effective date of an ordinance or resolution imposing a new or increased impact fee.”

APPENDIX: HOUSING AND LAND USE

To determine the existing level of service, it is necessary to determine the existing amounts of residential and nonresidential development, as well as the number of residents associated with each dwelling unit type. Identifying these quantities is the purpose of this appendix.

Information on existing land uses in Belle Isle is derived primarily from the Property Assessor's publicly-available tax parcel data base. This data base includes land use type, building floor area, and number of living units for each parcel. The land use code for single-family includes both detached and attached (townhome) units. Townhomes, however, have occupancy and trip characteristics much more like multi-family units (apartments and condominiums). Census estimates of housing unit types for Belle Isle indicate that approximately 2.61% of single-family units in the city are townhomes. That percentage was used to estimate the number of existing townhomes and move those units into the multi-family category. The results are shown in Table 27.

Table 27. Existing Land Use by Type

Land Use	Unit	Total Units
Single-Family Detached	Dwelling	2,508
Multi-Family	Dwelling	340
Total Residential	Dwelling	2,848
Retail/Commercial	1,000 sq. ft	373
Office	1,000 sq. ft	162
Public/Institutional	1,000 sq. ft	248
Total Nonresidential	1,000 sq. ft	783

Source: Orange County Property Assessor, 2021 and U.S. Census American Community Survey 2019 5-year sample table.

Average household size is household population divided by households. Local census data on average household size for Belle Isle is unreliable due to small sample size. Adequate sample sizes are available for areas of at least 100,000 people, called Public Use Microdata Areas, or PUMAs. The census data for such areas is available in the form of microdata, which includes records for each individual dwelling unit. The PUMA in Orange County that includes Belle Isle has average household sizes of 2.92 for single-family detached units and 2.57 for multi-family units, as calculated in Table 28 below. These household sizes should be reasonably representative of housing units in the city.

Table 28. Average Household Size by Housing Type

Housing Type	Household Residents	Households	Avg. HH Size
Single-Family Detached*	38,202	13,097	2.92
Multi-Family	41,222	16,023	2.57
Total	79,424	29,120	2.73

* includes mobile homes

Source: U.S. Census, American Community Survey, 2015-2019 5% sample microdata for Public Use Microdata Area 9504, which includes Belle Isle.